

In the Claims

Please amend claims 1-10 as follows:

(Amended) 1. A method of manufacturing [Claim 1.

Manufacture of] a sensor device comprising a circuit having organic thin films formed on an arbitrarily chosen [electrode board circuit and] electrodes, and a transducing element capable of transducing information recognized by the organic thin films into electric signals, the method comprising: [wherein:]

printing a solution of [a material of the] thin film material [is accurately printed via an ink-jet nozzle] as micro-dots onto [the required] surfaces of microelectrodes such [so] that organic thin films are formed on the microelectrodes [electrodes, thereby realizing highly dense microelectrodes].

(Amended) 2. The method of claim 1 [Claim 2.

Manufacture of the sensor device] wherein the solution of thin film material [a material of the thin films described in claim 1] comprises a composition resulting from [the] dissolution of an electro-conductive polymer in a solvent.

(Amended) 3. The method of claim 1 [Claim 3.

Manufacture of the sensor device] wherein the solution of thin film material [a material of the thin film described in claim 1] comprises a [solution of a] silicone-based surface modifying agent[, or a mixture thereof with a solvent].

(Amended) 4. The method of claim 1 [Claim 4.

Manufacture of the sensor device] wherein the solution of thin film material [a material of the thin film described in claim 1] comprises a mixture resulting from dissolution of a thiol compound in a solvent, and wherein the method further comprises forming gold thin films [are formed] on the surfaces [surface] of the microelectrodes [electrodes].

AT (Amended) 5. [Claim 5.] A method, using the sensor

device of claim 11, for evaluating the function of a [liquid] substance, the method comprising ejecting a [wherein, with the sensor device as described in claims 1 and 4, a solution of a substance or a liquid] substance to be sensed [is ejected into air via an ink-jet nozzle to fall] as micro-dots onto surfaces [on the surface] of organic thin membranes formed on the electrodes such [microelectrodes so] that the substance is subjected [submitted] to evaluation.

(Amended) 6. The method of claim 5 wherein the [Claim

6. A method for evaluating the function of a solution wherein, with the sensor device, the solution of a substance or a liquid] substance to be sensed [and ejected as micro-dots into air via the ink-jet nozzle as described in claim 5] comprises a bio-molecule [such as a protein, DNA, antibody, etc., or a physiologically active substance].

(Amended) 7. The method of claim 1 [Claim 7.

Manufacture of the sensor device as described through claim 1 to claim 4,] wherein the electrodes and the [electric] circuit are formed on a plastic substrate.

(Amended) 8. The method of claim 7 [Claim 8.

Manufacture of the sensor device as described in claim 7] wherein the [electric] circuit comprises [is composed of] poly-silicone thin film transistors.

(Amended) 9. The method of claim 5 [Claim 9. A

method for evaluating the function of a solution as described in claims 5 and 6,] wherein the electrodes and the [electric] circuit are formed on a plastic substrate.

(Amended) 10. The method of [Claim 10. A method for

evaluating the function of a solution as described in] claim 9, wherein the [electric] circuit comprises [is composed of] poly-silicone thin film transistors.

Please add claims 11-26 as follows:

--11. A sensor device comprising:

a circuit having electrodes on at least some of which organic thin films are formed by printing a solution of thin film material as micro-dots onto surfaces of electrodes; and

a transducing element capable of transducing information recognized by the organic thin films into electric signals.

12. The sensor device of claim 11 wherein the solution of thin film material comprises a composition resulting from dissolution of an electro-conductive polymer in a solvent.

13. The sensor device of claim 11 wherein the solution of thin film material comprises a silicone-based surface modifying agent.

14. The sensor device of claim 11 wherein the solution of thin film material comprises a mixture of a silicone-based surface modifying agent and a solvent.

15. The sensor device of claim 11 wherein the solution of thin film material comprises a mixture resulting from dissolution of a thiol compound in a solvent.

16. The sensor device of claim 11 further comprising gold thin films on the surfaces of the electrodes.

17. The sensor device of claim 11 in which the electrodes comprise microelectrodes.

18. The method of claim 1 in which the printing is performed using an ink-jet nozzle.

19. The method of claim 1 in which the printing results in high-density microelectrodes.

20. The method of claim 1 wherein the solution of thin film material comprises a mixture of a silicone-based surface modifying agent and a solvent.

21. The method of claim 5 wherein the substance to be sensed comprises a solution or a liquid.

22. The method of claim 5 wherein the ejection of the substance to be sensed is performed using an ink-jet nozzle.

23. The method of claim 22 wherein the substance ejected from the ink-jet nozzle falls as micro-dots onto the surfaces of the organic thin membranes formed on the electrodes.

24. The method of claim 5 wherein the substance to be sensed comprises a physiologically active substance.

25. The method of claim 6 wherein the bio-molecule comprises a protein, DNA, or an antibody.